

## **REMARKS**

Claims 1 and 19 are amended. Claims 1-23 remain pending in this application. Support for the claim amendments is found at, for instance, page 8, line 4 and throughout the specification. Accordingly, no new matter is incorporated by this Amendment.

With regard to the outstanding rejections, Applicants maintain that the arguments contained in the previous responses filed October 7, 2003 and April 11, 2003 clearly distinguish the claimed invention from the cited prior art. However, in the interest of advancing prosecution, Applicants now submit additional claim amendments to more clearly define the invention.

### **Rejections under 35 U.S.C. § 102**

Claims 1-10, 13-14, and 18-23 are rejected under 35 U.S.C. § 102(e) as purportedly anticipated by Oya et al., U.S. Patent No. 6,479,349. Applicants respectfully traverse.

In addition to the previous arguments raised against Oya et al., Applicants further note that the oxide layer made according to the invention is “grown through thermal oxide formation” whereas the oxide layers nitridated in Oya et al. are prepared using chemical vapor deposition. The distinction between these two methods produce oxide layers with highly variant physical properties. Oxide layers that are thermally grown are denser, less porous and with higher breakdown strength than oxide layers prepared by chemical vapor deposition. Also, in a method involving thermal oxide growth, the gated oxide layers are of better quality with highly controllable thickness. Therefore, a method involving an oxide layer made by chemical vapor deposition cannot anticipate a method involving an oxide layer grown through thermal oxide formation.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical

invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Also, See MPEP 2131.

Accordingly, Oya et al. fails to anticipate the claimed invention. Reconsideration and withdrawal are respectfully requested.

### **Rejections under 35 U.S.C. § 103**

Claims 11, 12, and 23 are rejected under 35 U.S.C. § 103(a) as purportedly unpatentable based on the combination of Oya et al., and Applicants' specification.

Claim 15 is rejected under 35 U.S.C. § 103(a) as purportedly unpatentable based on the combination of Oya et al., and Wu, U.S. Patent No. 6,323,094.

Claim 16 is rejected under 35 U.S.C. § 103(a) as purportedly unpatentable based on Oya et al. alone.

Claim 17 is rejected under 35 U.S.C. § 103(a) as purportedly unpatentable based on the combination of Oya et al. and Van Zant, "Microchip Fabrication, A Practical Guide to Semiconductor Processing" (2000) 4<sup>th</sup> Ed., McGraw Hill, pgs. 156, 160, 188, 189, 503, 513, and 514.

As noted above, Oya et al. is limited to teaching nitridation of an oxide layer formed by chemical vapor deposition in a chemical vapor deposition chamber. Oya et al. fails to teach or suggest a method involving nitridation of an oxide layer wherein the oxide layer is grown through thermal oxide formation. In addition, Oya et al. teaches away from the claimed invention in that one of ordinary skill in the art, upon reviewing the teaching of Oya et al. would be motivated to adopt chemical vapor deposition for forming an oxide layer as the reference only teaches oxide formation by chemical vapor deposition within a chemical vapor deposition chamber, and one of ordinary skill would be motivated to use the chemical vapor deposition chamber means as

suggested by the reference in the conventional manner of utilizing the means as taught. The reference discloses chemical vapor deposition chambers for their express purpose of forming oxide layers by chemical vapor deposition.

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). Thus one of ordinary skill in the art, upon reviewing Oya et al. would be motivated to employ chemical vapor deposition for oxide layer formation and not to employ thermal oxide growth in forming the oxide layer.

The secondary references all fail to cure this deficiency in Oya et al. Applicants submit that the Examiner has not yet set forth a *prima facie* case of obviousness. The PTO has the burden under § 103(a) to establish a *prima facie* case of obviousness. In re Fine, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Both the case law of the Federal Circuit and the PTO itself have made clear that where a modification must be made to the prior art to reject or invalidate a claim under § 103(a), there must be a showing of proper motivation to do so. The mere fact that a prior art reference could be modified to meet the claim is insufficient to establish obviousness. The PTO “can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.” Id. In order to establish obviousness, there must be a suggestion or motivation in the reference to do so. See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 15 U.S.P.Q.2d 1321 (Fed. Cir. 1990); *see also* In re Gordon, 221

U.S.P.Q. 1125, 1127 (Fed. Cir. 1984) (prior art embodiment could not be turned upside down without motivation to do so).

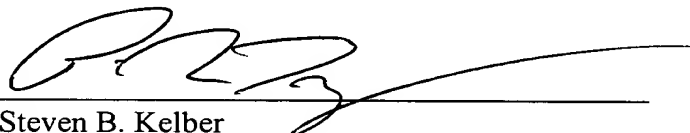
Reconsideration and withdrawal are respectfully requested.

### **CONCLUSION**

All rejections having been addressed by the present amendments and response, Applicants submit that the present case is in condition for allowance and respectfully request early notice to that effect. If any issues remain to be addressed in this matter which might be resolved by discussion, the Examiner is respectfully requested to call Applicants' undersigned counsel at the number indicated below.

Respectfully submitted,

PIPER RUDNICK LLP

A handwritten signature in black ink, appearing to read 'S. Kelber', is written over a horizontal line.

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